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BEFORE
THE PUBLIC SERVICE COMMISSION OF
SOUTH CAROLINA
DOCKET NO. 91-677-G - ORDER NO. 93-412 ✓

MAY 7, 1993

IN RE: Proceeding to Establish Integrated) ORDER
Resource Planning (IRP) for Gas) GRANTING
Utilities.) MODIFICATIONS

This matter comes before the Public Service Commission of South Carolina (the Commission) on the Commission Staff's request to modify the Integrated Resource Planning (IRP) procedures established by the Commission in Order No. 93-145, dated February 8, 1993.

Order No. 93-145 established a procedure to utilize the concept of IRP relating to natural gas utilities. A comprehensive procedure was established in that Order. That Order also stated on Page 5 that: "the Commission will periodically review and when appropriate modify existing IRP procedures and will also address new issues as they evolve."

On February 18, 1993, the Commission Staff issued a memo to all parties of record in this Docket proposing an addendum to Order No. 93-145, which would be applicable when the gas utilities file new or modified demand side management (DSM) programs between IRP and short term action plan (STAP) filings. In that memorandum, it was stated that the Staff's overriding concern was

that Staff and the other parties be given the necessary information in a timely manner by the Company, so that a full understanding of the new or modified DSM programs could be achieved. Staff intended that the parties should be allowed to discuss any issues with the companies, and that a good faith effort should be made by all to resolve any disputed issues within the allotted time frame. Staff went on to state that, once an appropriate review had been conducted, the Commission would make the necessary findings to enable the companies to proceed with the implementation of their DSM options. The Staff further stated that the procedure was not intended to prejudice the right of any party to question the appropriateness of the DSM programs and their related costs in the future, consistent with the established IRP procedures. The steps in the revised procedures were summarized as follows:

1. Filings with the Commission of new or modified DSM programs for evaluation of their reasonableness and cost effectiveness shall be provided to parties of the existing docket. These filings will provide the Commission, the Staff, and the parties of record with information on the proposed new or modified DSM programs.
2. The Staff has developed a list of minimum filing requirements for new or modified DSM program filings which was attached to the memorandum of February 18, 1993. The minimum requirements to be filed with any new or modified program were able to be modified from time to time by the Staff.
3. Staff proposed that the Company would meet with any interested party of record at the request of the party to discuss the new or modified DSM program. The parties would have 60 days to resolve any issue.
4. At the end of the 60-day period, the Staff would

present the new or modified DSM program to the Commission. If there were unresolved issues, any party could present its position to the Commission for resolution. After resolution by the Commission, the Commission would issue a decision. The Commission finding that the Company had adequately demonstrated that the program is reasonable and cost-effective, based on the Company's current best estimates and consistent with the IRP procedures, and the requirements set forth within this procedure would allow the Company, according to Staff, to:

- (a) proceed with implementation of the DSM program as filed, including payment of customer incentives, if any, and
- (b) include the specific DSM costs in any previously approved deferral account (if said account has been established).

The Staff also stated the IRP procedures required that at the time of cost recovery, the utility must also comply with the requirements established within the procedures. After a time, comments were received from Nucor Steel, a Division of Nucor Corporation (Nucor Steel) and South Carolina Electric & Gas Company (SCE&G). Nucor's comments suggested that the filing requirements include a copy of any studies, analyses, or work papers. Staff stated in a memorandum dated April 9, 1993 to all parties that, it was Staff's position that the intent of Item No. 1 of the addendum was that the work papers, etc. be provided, if requested, and where necessary to fully understand an option. In this regard, Staff determined on April 9, 1993, that it was of the opinion that no further changes had to be made to the addendum to satisfy Nucor's concern.

SCE&G suggested, during the comment period, that "\$/BTU saved"

could be used to make the determination called for in Item No. 15 of the original procedure. The Commission agrees with this proposition. SCE&G further requested clarification of Item No. 16 of the original procedure to ensure that it was consistent with the provisions of Item 6 a through e of the currently approved IRP procedure. Staff, in its memo of April 9, 1993, stated that it was unable to find any inconsistency in Item No. 16, as it was Staff's position to require the results of each test conducted, and not to select any specific type of test as being the most appropriate.

Staff now comes before the Commission with the proposed addendum, requesting that this Commission modify Order No. 93-145 accordingly.

The Commission has examined the addendum and finds that it does satisfy the concern of the Staff, the Commission, and all parties, as how to handle new or modified DSM programs between IRP and STAP filings. The Commission believes that the addendum is fair and equitable to all parties, and that all parties to this Docket were given appropriate time to comment on the Staff's proposal. The Commission believes that Staff's proposal should be adopted, and that, as SCE&G suggests, Item 15 can be determined by the use of the parameter "\$/BTU saved."

IT IS THEREFORE ORDERED THAT:

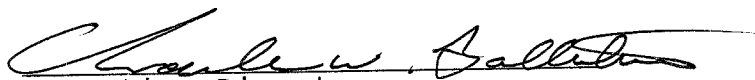
1. The addendum proposed by Staff as contained within this document is adopted.
2. That the procedure in our Order No. 93-145 is modified accordingly.

3. That attached to this Order as Appendix A is the full procedure for gas integrated resource planning as amended by the Staff addendum, and that the attached shall constitute the official gas IRP procedure until further Order of the Commission.

BY ORDER OF THE COMMISSION:


Chairman

ATTEST:


Executive Director

(SEAL)

DOCKET NO. 91-677-G
INTEGRATED RESOURCE PLANNING PROCESS FOR GAS UTILITIES
SOUTH CAROLINA PUBLIC SERVICE COMMISSION
JANUARY 26, 1993*

IRP OBJECTIVE:

The objective of the IRP process is the development of a plan that results in the minimization of the long run total costs of the utility's overall system and produces the least cost to the consumer consistent with the availability of an adequate and reliable supply of gas while maintaining system flexibility and considering environmental impacts. In conjunction with the overall objective, the IRP should contribute toward the outcomes of improved customer service, additional customer options, and improved efficiencies of energy utilization.

A. IRP FILING AND REPORTING PROCEDURES

1. The gas utilities are to file a 15 year IRP every three years separated into three five year time periods. The three five year planning periods can contain varying degrees of specificity. (For example, the initial five year plan may contain the most detail with a descending degree of detail within the second and third 5 year planning periods if necessary to reflect varying degrees of future uncertainty.) Justification needs to be provided by those gas utilities which do not find it necessary or appropriate to plan for the full 15 year time period.

The first gas IRP's are to be filed beginning in 1994 in accordance with the following schedule:

January 1.....Piedmont
April 1.....SCPC
July 1.....United Cities
October 1.....SCE&G

Future IRP filings shall be made on a quarterly staggered basis.

- a. The IRP filing must comply with all procedural and substantive requirements set forth herein and any additional requirements established by the Commission in future proceedings.

- b. Upon receipt of each utility's IRP filing, a separate docket will be established by the Commission for the IRP of each utility. At this time interested parties will be given an opportunity to intervene in the separate IRP dockets. Such parties will have 30 days to intervene from publication of the notice.
- c. Each utility will provide a copy of its IRP filing to each intervenor no later than 5 days after receiving the notice of intervention.
- d. An executive summary of the major aspects of the plan should be filed by the utility at the time it files the IRP. This summary must include the following:
 - 1. An overview of the plan.
 - 2. The objectives of the IRP and how the plan intends to achieve the objectives
 - 3. The specific resource options chosen and how they are consistent with the objectives of the IRP.
 - 4. An overview of the environmental impacts of the plan.
 - 5. A summary risk assessment of the plan.
- e. Approximately 10 days after the close of intervention, a conference will be held between each company and the parties of record in that docket. All participating parties will identify a list of preliminary issues and serve them on the Company five (5) days prior to the conference. The purpose of the conference will be to discuss the procedural aspects of the proceeding, including discovery, and in addition to establish a mechanism for a collaborative process, which will be utilized to examine and hopefully resolve many of the relevant issues. When issues are to be discussed during the collaborative process, the utility shall make available knowledgeable experts who can fully explain issues raised by the parties of record. Additional meetings and formal conferences may be held as part of this process for reviewing the issues. Such meetings may be held among individual parties or collectively as desired. If needed, the Commission will conduct a hearing to address the reasonableness of the Company's IRP. The hearing will address any issues raised through the collaborative process which were not resolved. The hearing will focus on the specific issues of concern and/or the points of disagreement resulting within the conference process pertaining to the utility's compliance with the established IRP procedures. In addition, the hearing can address requests to modify the existing planning process. Each utility will be expected to defend its

IRP filing regarding compliance with the procedures established under the IRP process at the conference and within any prescribed hearing that is required.

- f. At the conclusion of the IRP review the Commission will determine whether the IRP filed by each utility is reasonable at that point in time. Such a determination by the Commission does not constitute avoidance of any prudence review, siting approvals, etc. required by law or deemed necessary by the Commission.
- g. The IRP process is dynamic and complex requiring various assumptions, forecasting techniques, and planning methodologies. The IRP process must recognize the limitations on resources available to the Commission and its Staff to evaluate the various IRP's. The Commission might wish to review alternatives in addition to those incorporated within the utility's IRP. The Commission may choose to specify reasonable alternatives not included within the IRP for the utility to develop and provide to the Commission. The exploration and evaluation of any such alternative is not to be a specific part of the IRP filed by the utility. The information could be used by the Commission to evaluate the utility's IRP. Parties of record and Staff may request the Commission to require the utilities to perform analyses or develop alternatives not included within the utilities filed IRP.
- h. The docket for each utility will be closed at the end of the three (3) years prior to the filing of the next IRP.
- i. Each utility must file with the Commission any significant changes to its IRP within 30 days of its decision to change/amend the IRP. The filing will include the analysis of the modification on which the decision was based. When feasible, the utility should give reasonable advance notice to the Commission and the parties of record of any significant change it decides to make in the IRP.
- j. Major changes, e.g. in laws, may necessitate modification of the timetable set forth for the filing and reporting procedures.
- k. The parties of record should make every effort among themselves to resolve any disagreements concerning the protection of confidential information. If the parties are unable to reach a satisfactory resolution, the specific matter can be presented to the Commission for a ruling. Documents provided to parties on a

confidential basis shall remain confidential, unless deemed otherwise by the Commission.

2. The utilities must file a short-term action plan (STAP) with the Commission in each of the intervening two years between the filing of the 15 year plans. Each STAP is to be filed twelve months after the utilities' IRP anniversary date.

a. Each STAP shall incorporate:

1. Description of the implementation of the IRP.
2. Description of each resource option and program including its basic objective.
3. Criteria for measuring the progress of each option and program toward meeting the objective.
4. Implementation schedule for each program.
5. Review of the progress of each program.
6. Identification of specific problems that have arisen with the implementation of the plan and proposals for dealing with these problems.
7. Actual costs incurred for the DSM options during the previous calendar year, and the benefits achieved.

b. When filed, a copy of the short-term action plan will also be served by the utility on all parties to the IRP docket which preceded the STAP. The filings will be reviewed to determine the progress of the utility toward achieving the objectives of the plan.

c. Reasonable discovery requests related to a significant change to the IRP or second STAP shall be permitted for forty-five (45) days after the filing of either document. Any party may request a prehearing conference, additional discovery and/or a hearing on any STAP or changes to the IRP for good cause shown.

B. REQUIREMENTS FOR THE DEVELOPMENT AND COMPOSITION OF THE IRP FILING.

1. The IRP filing must contain a statement of both long-term and short-term objectives of the utility and how these objectives address the overall objective of the IRP process as stated by the Commission.
2. A copy of relevant supporting documentation necessary to explain and understand the IRP must be filed with it.

3. The IRP filing must indicate how the resource plans seek to ensure that each utility incorporates the lowest cost options for meeting the natural gas needs of consumers, consistent with the availability of an adequate and reliable supply of natural gas.
4. The IRP filing must seek to incorporate the customer as a part of the planning process through opening direct and indirect lines of communication; providing useful information to consumers for efficient energy choices; providing various energy alternatives; and through sending proper pricing signals.
 - a. As a part of this endeavor, each utility should identify existing programs that seek to encourage consumer participation in DSM options, including conservation.
 - b. The planning process should solicit consumer input as an integral part of the planning function.
5. In evaluating potential options for incorporation within the IRP, each utility must employ unbiased analysis.
6. The IRP filing must evaluate the cost effectiveness of each supply-side and demand-side option in a manner that considers relevant costs and benefits. To ensure proper evaluation, the screening of DSM resources can be based on more than one test. No single test is always appropriate for all situations. Each option must be evaluated, using the appropriate test or tests, and the analysis should include all appropriate costs.
 - a. The utility must justify the use of a specific test or tests employed as part of the basis for adoption or rejection of a specific resource. No individual option that passes the TRC test shall be rejected solely on the basis of its failure of the RIM test, unless the utility demonstrates good cause for rejecting such option, consistent with subsection B(7) below.
 - b. If a chosen option is not the least cost, according to the appropriate test, the utility must provide a detailed explanation with supporting evidence for its choice.
 - c. Each utility must retain sufficient supporting data and test results for each option actually tested but not selected until the docket is closed. This information is subject to discovery.

- d. For chosen options, sufficient data supporting each test must be available for review until the docket is closed.
- e. For options that are chosen, each utility must provide the following:
 - 1. Summary results of all tests utilized.
 - 2. Major assumptions used for the chosen option.
 - 3. Justification of the test or tests used as the basis for the option selection.
- 7. A measure of the net benefits resulting from the options chosen within the IRP must be provided by each utility. The utility shall propose an IRP which minimizes total resource costs to the extent feasible, giving due regard to other appropriate criteria such as system reliability, customer acceptance and rate impacts.
- 8. Environmental costs are to be considered on a monetized basis where sufficient data is available. Those environmental costs that cannot be monetized must be addressed on a qualitative basis within the planning process. Environmental costs are to be considered within the IRP to the extent that they impact the utility's specific system costs such as meeting existing regulatory standards and such standards as can be reasonably anticipated to occur. The term "reasonably anticipated to occur" refers to standards that are in the process of being developed and are known to be forthcoming but are not finalized at the time of analysis. This does not mean that the utility is prohibited from incorporating factors which go beyond the above definition. Should the utility feel that other factors (environmental or other) are important and need to be incorporated within the planning process, it needs to justify within the IRP the basis for inclusion.
 - a. Environmental costs should be monetized and included within the planning process whenever possible. To the extent that environmental costs cannot be monetized, the utility must consider them on a qualitative basis in developing the plan. The same guideline applies to relevant utility and customer costs.
 - b. Each utility must provide the general environmental standards applicable to each supply-side option and explain the impact of each supply-side option on compliance with the standards. To the extent feasible each utility should seek to identify on a quantitative basis the impact of demand-side options on the environment (i.e. reduced pollutant emissions, reduced

waste disposal, increased noise pollution, etc.) Such impacts can be reflected on a qualitative basis when quantitative information is not available.

- c. Each utility should identify and monetize, to the extent possible, the cost of compliance for existing and projected supply-side options.
9. Each utility must provide a demand forecast (to include winter peak demand) and an energy forecast. Forecasting requirements for the IRP filing shall include:
 - a. Forecast must incorporate explicit treatment of demand-side resources.
 - b. Forecasting methodologies should seek to incorporate "end-use" modeling techniques where they are appropriate. End-use and econometric modeling techniques can be combined where appropriate to seek accuracy while being able to address the impacts of demand-side options.
 - c. The IRP filing must incorporate energy and peak demand forecasts that include an explanation of the forecasting methodology and modeling procedures.
 - d. The IRP filing must incorporate summary statistics for major models; assumptions followed within the forecasting process; projected energy usage by customer class; load factors by customer class; and total system sales. The utility must file this information, either as part of the IRP or as supplemental material to the IRP.
 - e. An analysis must be performed to assess forecast uncertainty. This may consist of a high, most likely, low scenario analysis.
 - f. The utility should periodically test its forecasting methodology for historical accuracy.
 - g. The utility must identify significant changes in forecasting methodology.
 10. The IRP filing must include a discussion of the risk associated with the plan (risk assessment). Where feasible the impacts of potential deviations from the plan should be identified.
 11. The system improvements and/or additions necessary to support the IRP will also be provided within the plan.
 12. The plan must incorporate an evaluation and review of the existing demand-side options utilized by the utility. It

should identify any changes in objectives and specifically identify and quantify achievements within each specific program. The plan should include a description of each program; program objectives; implementation schedule; and program achievements to date. An explanation must be provided outlining the approaches used to measure program achievements and benefits.

13. The IRP filing must identify and discuss any significant studies being conducted by the company on future demand-side and/or supply-side options.
14. The IRP must be flexible enough to allow for the unknowns and uncertainties that confront the plan. The IRP must have the ability to quickly adapt to changes in a manner consistent with minimizing costs while maintaining reliability.
15. The utilities must incorporate as part of their IRP's a maintenance and refurbishment program of existing system when economically viable and consistent with system reliability and planning flexibility.
16. The utility will provide a description of any consideration of joint planning with other utilities.
17. The IRP filing must identify any major problems the utility anticipates that have the potential to impact the success of the plan and the planning process. Strategies which might be invoked to deal with each problem should be identified whenever possible.
18. Each utility must demonstrate that the IRP incorporates efficient and cost effective transmission and distribution system costs consistent with the minimization of total system costs. Any supporting information can be filed as a supplement to the IRP.
19. Each utility must explain and/or describe any new technologies included in the IRP.
20. Each future supply-side option incorporated within the IRP must be identified. The fuel source; anticipated capacity; anticipated date of initial construction; anticipated date of commercial operation; etc. must be provided for each option. The utility shall identify the anticipated location of any future supply-side option when it is consistent with the utility's proprietary interests.
21. The IRP must demonstrate that each utility is pursuing those resource options available for less than the avoided costs of new supply-side alternatives. Demand-side options will be included in the IRP to the extent they are cost-effective and are consistent with the Commission

objective statement for the IRP. Utility DSM plans shall give attention to capturing lost opportunity resources. These include those cost effective energy efficiency savings that can only be realized during a narrow time period, such as in new construction, renovation, and in routine replacement of existing equipment.

22. The IRP should provide plans for each of the following items:
 - a. Gas supply and purchasing practices
 - b. Supply allocation
 - c. Supply reliability
 - d. Conservation practices
 - e. Efficiency standards
 - f. Customer and utility incentive programs
 - g. Legislative issues
 - h. Rate Design
 - i. Integrated efforts of providers of competing fuels to achieve the objectives of the IRP process
23. The Commission realizes that the IRP process is dynamic and that modifications may be necessary over time. New issues may arise, existing issues or components of the plan may change in significance, and improved analysis techniques may be developed. As these occur, they will be evaluated for possible incorporation into the IRP process, or for separate consideration.
24. Identify methodology for calculating avoided cost.
25. Identify the methodology used to measure the achieved benefits under the DSM options.
26. Identify the annual dollar amounts of direct DSM expenditures and the expected benefits that the Company expects to make during the planning period.
27. a. DSM cost recovery should be addressed on a utility by utility basis. When the utility files its IRP it can also file a plan for a DSM cost recovery mechanism which addresses the methodology that the Company would prefer to follow. If a utility seeks approval of a cost recovery mechanism in conjunction with its IRP filing, the IRP and the cost recovery mechanism must be filed simultaneously. Any such proposed cost recovery mechanism should be consistent with the South Carolina Energy and Conservation Act of 1992. A utility may choose to seek Commission approval of its DSM cost recovery mechanism at the same time it

files the IRP; or the utility might choose to seek approval of a cost recovery mechanism at the same time it seeks the actual recovery of DSM costs.

- b. When a DSM cost recovery mechanism is filed by the Company it will include an explanation of the specific means to be employed for the recovery of direct DSM costs and any other possible items which would impact customer rates such as DSM incentives. It must include an explanation of the approaches to be followed in determining projected and actual DSM benefits and projected and actual DSM costs. At the time that the Company seeks to recover DSM costs, the cost recovery filing should identify any proposed rate impacts on individual rate classes resulting from DSM costs.
28. The concept of fuel switching may be reviewed on an ongoing basis as a part of this gas IRP process.
 29. The following procedures would be applicable when the utilities file new or modified DSM programs between IRP and STAP filings.

The steps in the procedures are summarized as follows:

1. Filings with the Commission of new or modified DSM programs for evaluation of their reasonableness and cost effectiveness shall be provided to parties of the existing docket. These filings will provide the Commission, the Staff, and the parties of record with information on the proposed new or modified DSM programs.
2. The Staff has developed a list of minimum filing requirements for new or modified DSM program filings. Minimum requirements to be filed with any new or modified program (see Appendix A) may be modified from time to time by the Staff.
3. The Company will meet with any interested party of record at the request of the party to discuss the new or modified DSM program. The parties will have 60 days to resolve any issue.
4. At the end of the 60-day period, the Staff will present the new or modified DSM program to the Commission. If there are unresolved issues, any party may present its position to the Commission for resolution. After resolution by the Commission, the Commission will issue a decision. A Commission finding that the Company has adequately demonstrated that the program is reasonable and cost-effective based on the Company's current best estimates and

consistent with the IRP procedures and requirements will allow the Company to:

- a) proceed with the DSM program as filed, including payment of customer incentives, if any, and
- b) include the specified DSM costs in any previously approved deferral account (if said has been established).

The IRP procedures require that at the time of cost recovery, the utility must also comply with the requirements established within these procedures.

FILING REQUIREMENT FOR NEW AND MODIFIED DSM PROGRAMS

1. Description of Program.
2. Specific Program Objectives.
3. Targeted Sector Description.
4. Program Service Life.
5. Total Market Potential (number of customers or other appropriate measure).
6. Expected Saturation of Program (including anticipated market growth throughout program service life).
7. Summer/Winter On-Peak Demand Change Per Installation (per customer).
8. Annual Energy (dekatherms) Change Per Installation.
9. Calculation of Any Estimated "Lost Revenues" Along with Explanation of how these were estimated.
10. Calculation of Any "Net Lost Revenues" Resulting From DSM Programs Which the Company Will Seek to Recover.
11. Sources of Expected Load Shape Impact Data (conservation, valley filling, peak shaving and load shifting).
12. The Total Program Cost Estimates on a Present Worth Basis.
13. The Total Program Benefit Estimates on a Present Worth Basis (itemized and quantified).
14. Source(s) of Cost and Benefit Data.
15. Relative Costs - \$/Dekatherms Saved, \$/Demand Saved and/or \$/BTU Saved.
16. Test Results Including:
 - a) Utility Cost Test Results (most current analysis).
 - b) Total Resource Cost Test Results (most current analysis).
 - c) Rate Impact Measure Test Results (most current analysis).
 - d) Any other Test and Test Results necessary to evaluate the program.
17. Explain Which Test(s) were Appropriate to Evaluate the Option and Why.

18. Customer and Vender Incentives, Their Purpose and How They Were Derived.
19. Any Itemized Proposed DSM charges That the Company Will Seek to Recover over Life of Program.
20. Calculation of Any Proposed Rewards Per Option to be Obtained by the Company.
21. Proposed Program Evaluation Method (including planned load research methods).
22. Marketing Strategies (including examples of marketing media to be employed).
23. Potential Program Pitfalls Considered.